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EXAMINER

MARCHESECHI, M

A1M1/0908

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ART UNIT

PAPER NUMBER

1108

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DATE MAILED: 09/08/95

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

This application has been examined Responsive to communication filed on _____ This action is made final.

A shortened statutory period for response to this action is set to expire Three³ month(s), _____ days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- Notice of References Cited by Examiner, PTO-892.
- Notice re Patent Drawing, PTO-948.
- Notice of Art Cited by Applicant, PTO-1449.
- Notice of Informal Patent Application, Form PTO-152.
- Information on How to Effect Drawing Changes, PTO-1474.
- Interview Summary

Part II SUMMARY OF ACTION

1. Claims 1-37 are pending in the application.

Of the above, claims 12 - 16, 28 - 37 are withdrawn from consideration.

2. Claims _____ have been cancelled.

3. Claims _____ are allowed.

4. Claims 1-11, 17-27 are rejected.

5. Claims _____ are objected to.

6. Claims _____ are subject to restriction or election requirement.

7. This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

8. Formal drawings are required in response to this Office action.

9. The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are acceptable. not acceptable (see explanation or Notice re Patent Drawing, PTO-948).

10. The proposed additional or substitute sheet(s) of drawings, filed on _____ has (have) been approved by the examiner. disapproved by the examiner (see explanation).

11. The proposed drawing correction, filed on _____, has been approved. disapproved (see explanation).

12. Acknowledgment is made of the claim for priority under U.S.C. 119. The certified copy has been received not been received
 been filed in parent application, serial no. _____; filed on _____

13. Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. Other

EXAMINER'S ACTION

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Restriction to one of the following inventions is required under 35 U.S.C. 121:

Group I. Claims 1-11 and 17-27, drawn to composition, classified in Class 106, subclass 735.

Group II. Claims 12-14, drawn to fire proofing sprays, classified in Class 106, subclass 18.11.

Group III. Claims 15, 16 and 28-37, drawn to board and method, classified in Class 156, subclass 39.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as mutually exclusive species in intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product (M.P.E.P. § 806.04(b), 3rd paragraph), and the species are patentably distinct (M.P.E.P. § 806.04(h)).

In the instant case, the intermediate product is deemed to be useful as composition for making a flower pot and the inventions are deemed patentably distinct since there is nothing on this record to show them to be obvious variants. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case.

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In either instance, if the examiner finds one of the inventions anticipated by the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. § 103 of the other invention.

Inventions I and III are related as mutually exclusive species in intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product (M.P.E.P. § 806.04(b), 3rd paragraph), and the species are patentably distinct (M.P.E.P. § 806.04(h)).

In the instant case, the intermediate product is deemed to be useful as composition for making a flower pot and the inventions are deemed patentably distinct since there is nothing on this record to show them to be obvious variants. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions anticipated by the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. § 103 of the other invention.

Inventions II and III are distinct because they belong to a mutually exclusive class of invention

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by

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their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with Cynthia L. Schaller on August 31, 1995 a provisional election was made with traverse to prosecute the invention of group I, claims 1-11 and 17-27. Affirmation of this election must be made by applicant in responding to this Office action. Claims 12-16 and 28-37 are withdrawn from further consideration by the Examiner, 37 C.F.R. § 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 C.F.R. § 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a diligently-filed petition under 37 C.F.R. § 1.48(b) and by the fee required under 37 C.F.R. § 1.17(h).

Claims 1, 2, 7, 17, 18, 22-24, 26 and 27 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 17, 23 and 26 are indefinite because the silica fume component is encompassed by the pozzolanic filler component.

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Claims 2, 18 and 24 are indefinite as to the term 'substantially' because this does not properly define the composition. Is the composition free of alpha-gypsum or not? It is suggested that this term be canceled.

Claims 7, 22 and 27 are indefinite as to the phrase 'an effective amount' because it does not properly define the amount. An effective amount to do what? It is suggested that this phrase be canceled.

The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Evaluations of the level of ordinary skill in the art requires consideration of such factors as various prior art approaches, types of problems encountered in the art, rapidity with which innovations are made, sophistication of technology involved, educational background of those actively working in the field, commercial success, and failure of others.

The "person having ordinary skill" in this art has the capability of understanding the scientific and engineering principles

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applicable to the claimed invention. The evidence of record including the references and/or the admissions are considered to reasonably reflect this level of skill.

Claims 1-11 and 17-27 are rejected under 35 U.S.C. § 103 as being unpatentable over Bentur et al. in view of Kosmatka et al., Francis et al. and Jorgenson

Bentur et al. teach in the abstract, introduction and experimental sections a composition that is used for a wide variety of building components comprising 75 wt. percent beta gypsum hemihydrate, and 25 wt. percent of a mixture of portland cement and silica fume. It is shown that said mixture include 0-25 wt. percent portland cement and from 25-0 wt. percent silica fume (i.e. 20 wt. percent portland cement and 5 wt. percent silica fume). This reference fails to teach the other pozzolanic filler (pumice and fillite) and corresponding amount (claims 1, 5, 6, 9, 10, 17, 20, 23 and 26). In addition, the type of portland cement (claims 3, 19 and 25), additional additives (claims 7, 22 and 27) and sand component (claims 8 and 11) is not disclosed. Finally, the thickness of the construction material is not disclosed (claim 23).

Kosmatka et al. teach on page 64 and 65 that pozzolanic fillers (i.e. pumice) are well known materials to be incorporated into cementitious compositions in order to enhance a variety of characteristics of the compositions. It is also shown that set control additive, water reducers etc. are well known conventional

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additives to be used in cementitious compositions in order to control the setting of the composition, reduce the water demand, etc. On page 15 and 16 it is shown that type III portland cement is a well known type of cement to be used to produce cementitious compositions.

Francis et al. teach in column 3 lines 46-61 the functional equivalence of the alpha and beta forms of gypsum when used in conjunction with a pozzolan (fly ash). In addition, it is shown that fillite is a well known filler to be used in conjunction with gypsum to produce a cementitious composition.

Jorgenson teach in the abstract that it is well known to produce a flooring composition by incorporating sand into a calcium sulfate hemihydrate composition in an amount of between 13-30 parts per 10 parts of calcium sulfate hemihydrate.

It is the examiners position that it would have been obvious to incorporate a pozzolanic filler (pumice) in the composition according to Bentur et al. because Kosmatka et al. teach that this component is a well known additive to be used in cementitious composition in order to improve a variety of characteristics. In addition, the use of a filler will optimize the composition because it will fill in the voids present in the composition produced from the main components thus optimizing certain properties. The amount of this material would have been obvious because it is the examiners position that said amount

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would have proved to be obvious through routine experimentation. In the absence of any evidence showing that the claimed amounts are critical (unexpected results), no distinction is seen to exist. It is also the examiners position that the type of portland cement would have been obvious as the cement according to Bentur et al. because Kosmatka et al. teach that this type of portland cement is a well known conventional cement to be used to produce cementitious compositions. In addition, Bentur uses portland cement in general and it is the examiners position that this specific type is obvious because it is encompassed by the general teaching of portland cement. It is also the examiners position that it would have been obvious to incorporate additional components (set control additives, water reducers etc.) in the composition according to Bentur et al. because Kosmatka et al. teach that these components are well known conventional additives to be used in cementitious composition in order to control the setting of the composition, reduce the water demand, etc. It is also the examiners position that it would have been obvious to produce a flooring composition by the addition of sand to the composition according to Bentur et al. because Jorgenson teach that it is well known to add sand to a calcium sulfate hemihydrate composition in similar amounts in order to produce a flooring composition. The use of fillite as the filler would have also been obvious in the composition

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according to the Bentur et al. because Francis et al. set forth that this is a well known conventional filler to be used in conjunction with gypsum to produce a cementitious composition. In addition, it is the examiners position that the thickness of the construction material would have been obvious depending on the end use of the composition. If one desired a construction sheet of a thickness of 1/8, the formation of said sheet to meet this size would have been obvious. In view of this, this limitation is viewed as an obvious design choice for the construction material. Finally, the subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the range disclosed by the reference because overlapping ranges have been held to be a *prima facie* case of obviousness, see *In re Malagari*, 182 U.S.P.Q. 549.

Applicants use the term 'about' which permits some tolerance. *In re Ayers* 69 USPQ 109 (CCPA 1946).

Claims 1-15 are rejected under 35 U.S.C. § 103 as being unpatentable over Harris in view of Francis et al., Kosmatka et al. and Jorgenson.

Harris teach in column 2 line 25-column 4 line 16 a cementitious composition comprising 25-60 wt. percent portland cement (can be type III), 40-75 wt. percent calcium sulfate hemihydrate (alpha form) and a pozzolan source (silica fume).

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The pozzolan source can either be added a separate component or as a blended cement. Irrespective of how its added, the pozzolan content should be between 3-50 wt. percent based on the weight of the cement. It is also shown that water reducers, set retarders, etc., can be added to the composition. This reference fails to teach the specific type of gypsum (beta form) and the absence of the alpha form (claims 1, 2, 9, 17, 18, 23, 24, and 26) is not disclosed. In addition, the other pozzolanic filler (pumice and fillite) and corresponding amount (claims 1, 5, 6, 9, 10, 17, 20, 23 and 26) and sand component (claims 8 and 11) are not disclosed. Finally, the thickness of the construction material is not disclosed (claim 23).

The teachings according to Francis et al., Kosmatka et al. and Jorgenson are set forth above.

It is the examiners position that it would have been obvious to replace alpha gypsum with beta gypsum in the composition according to Harris because the substitution of art recognized equivalents as shown by Francis et al. would have been within the level of ordinary skill in the art. The examiner acknowledges that Francis et al. use fly ash as the pozzolan but since the claimed invention incorporates silica fume (a pozzolan) and another pozzolanic filler, no distinction is seen to exist because the reference teaches the functional equivalence when used in conjunction with a pozzolan. In the absence of any

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evidence that the claimed pozzolans will not meet the criteria (pozzolan) of Francis et al. no distinction is seen to exist. It is also the examiners position that it would have been obvious to incorporate a pozzolanic filler (pumice) in the composition according to Harris because Kosmatka et al. teach that this component is a well known additive to be used in cementitious composition in order to improve a variety of characteristics. In addition, the use of a filler will optimize the composition because it will fill in the voids present in the composition produced from the main components thus optimizing certain properties. The amount of this material would have been obvious because it is the examiners position that said amount would have proved to be obvious through routine experimentation. In the absence of any evidence showing that the claimed amounts are critical (unexpected results), no distinction is seen to exist. It is also the examiners position that it would have been obvious to produce a flooring composition by the addition of sand to the composition according to Harris because Jorgenson teach that it is well known to add sand to a calcium sulfate hemihydrate composition in similar amounts in order to produce a flooring composition. The use of fillite as the filler would have also been obvious in the composition according to the Harris because Francis et al. set forth that this is a well known conventional filler to be used in conjunction with gypsum to produce a

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cementitious composition. In addition, it is the examiners position that the thickness of the construction material would have been obvious depending on the end use of the composition. If one desired a construction sheet of a thickness of 1/8, the formation of said sheet to meet this size would have been obvious. In view of this, this limitation is viewed as an obvious design choice for the construction material. Finally, the subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the range disclosed by the reference because overlapping ranges have been held to be a *prima facie* case of obviousness, see *In re Malagari*, 182 U.S.P.Q. 549.

Applicants use the term 'about' which permits some tolerance. *In re Ayers* 69 USPQ 109 (CCPA 1946).

In view of the teachings as set forth above, it is the examiners position that the references reasonably teach or suggest the limitations of all the claims.

"A reference can be used for all it realistically teaches and is not limited to the disclosure in it preferred embodiments" See *In re Van Marter*, 144 USPQ 421.

Claims 1-5, 7, 11 and 17-27 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-15 of copending

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application Serial No. 08/253,333. Although the conflicting claims are not identical, they are not patentably distinct from each other because the reduction to practice of the claims of the copending application would render obvious the instant claims. Claim 11 is incorporated in this rejection because the sand component does not have to be present.

This is a *provisional* obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim 6 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-15 of copending application Serial No. 08/253,333 in view of Francis et al.

This is a *provisional* obviousness-type double patenting rejection.

The teachings according to Francis are set forth above.

It is the examiners position that it would have been obvious to use fillite as the filler in the composition according to the copending application because Francis et al. set forth that this is a well known conventional filler to be used in conjunction with gypsum to produce a cementitious composition.

Claims 8, 9, 10 and 11 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-15 of copending application

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Serial No. 08/253,333 in view of Jorgenson and Francis et al.

This is a *provisional obviousness-type double patenting* rejection.

The teachings according to Jorgenson and Francis et al. are set forth above.

It is the examiners position that it would have been obvious to produce a flooring composition by the addition of sand to the composition according to the copending application because Jorgenson teach that it is well known to add sand to a calcium sulfate hemihydrate composition in similar amounts in order to produce a flooring composition. Claim 11 is incorporated in this rejection because the sand/calcium sulfate hemihydrate composition component appears to be the same. It is also the examiners position that it would have been obvious to use fillite as the filler in the composition according to the copending application because Francis et al. set forth that this is a well known conventional filler to be used in conjunction with gypsum to produce a cementitious composition.

This is a *provisional obviousness-type double patenting* rejection.

The *obviousness-type double patenting* rejection is a judicially established doctrine based upon public policy and is primarily intended to prevent prolongation of the patent term by prohibiting claims in a second patent not patentably distinct from claims in a first patent. *In re Vogel*, 164 USPQ 619 (CCPA 1970). A timely filed terminal disclaimer in compliance with 37 C.F.R. § 1.321(b) would overcome an actual or provisional rejection on this ground provided the conflicting application or

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patent is shown to be commonly owned with this application. See 37 C.F.R. § 1.78(d).

The examiner has cited the references directed to Kunzi et al., Stewart et al., Koslowski and Koslowski et al. as art of interest since they are cumulative to or less than the art relied upon in the rejections above. These additional references teach similar cement/gypsum compositions.

The reference cited on the 1449 have been reviewed by the examiner and is considered to be art of interest since it is cumulative to or less than the art relied upon in the above rejections.

Applicants are reminded to cancel the non-elected claims.

Any inquiry concerning this communication should be directed to Michael Marcheschi at telephone number (703) 308-3815.

Michael Marcheschi

8/30/95


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